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COMPLETE SPECIFICATION.

Improvements in the Manufacture of Hydrochlorate of Quinine.

A communication from abroad by LORETTA BARTON WELD, of Falmouth, in the State of Massachusetts, United States of America, Gentlewoman.

I, PHILLIP MIDDLETON JUSTICE of 55 and 56 Chancery Lane, in the County of Middlesex Fellow of the Institute of Patent Agents, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 The manufacture of hydrochlorate of quinine as heretofore practically carried on is attended with difficulties, delays, and expense, which it is the object of the present invention to obviate.

10 In carrying out the invention a sufficient quantity of sulphate of quinine is boiled in alcohol with chloride of sodium or common salt. The boiling is continued for about ten minutes and at the end of that time both salts will have become decomposed and converted into hydrochlorate of quinine and sulphate of soda in solution. The solution is then concentrated and cooled; when the sulphate of soda and any excess of chloride of sodium will be precipitated, after which the alcohol is evaporated, when the hydrochlorate will form in crystalline state.

15 The alcohol used is as free from water as possible, and it is best to use an excess of chloride of sodium.

In actual process of manufacture one part of sulphate of quinine is used to four parts of chloride of sodium and fifty parts more or less of alcohol.

20 By the means described the sulphate is effectually and completely converted into a hydrochlorate, and the crystalline product thus formed is free from anything but a trace of the other salt.

The boiling of the salts is performed either in a strong closed vessel under pressure, or in a retort so that the vaporized alcohol may be collected and conducted to a worm for condensation; the concentration of the solution is effected in like manner, if the 25 boiling in the first instance is effected in a closed vessel.

By this means the process is conducted with but little loss and is speedily effected, while the various steps are simple operations, readily performed without the use of acids and not requiring the constant careful and experienced manipulation required in the ordinary process of manufacture.

[Price 4d.]

Justice's Improvements in the Manufacture of Hydrochlorate of Quinine.

It has also been found from practical tests that the hydrochlorate made as described is more soluble than that resulting from the ordinary process of manufacture.

It will be understood that the precise proportions given may be varied if desired.

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Having now particularly described and ascertained the nature of the said invention, and in what manner the same is to be performed, as communicated to me by my foreign correspondent, I declare that what I claim is :—

1. The within described improvements in the manufacture of the hydrochlorate of quinine, consisting in dissolving in boiling alcohol the sulphate of quinine with chloride of sodium, precipitating the sulphate of sodium and any excess of chloride of sodium and then evaporating the alcohol, forming the hydrochlorate of quinine as crystals, substantially as described.

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2. In the manufacture of hydrochlorate of quinine, dissolving sulphate of quinine and chloride of sodium in boiling alcohol, concentrating the solution until sulphate of soda is precipitated, then separating the precipitate and evaporating, to deposit the hydrochlorate of quinine in a crystallized form, substantially as described.

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Dated this 14th day of March 1888.

PHILIP M. JUSTICE.

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